

FIG. 1

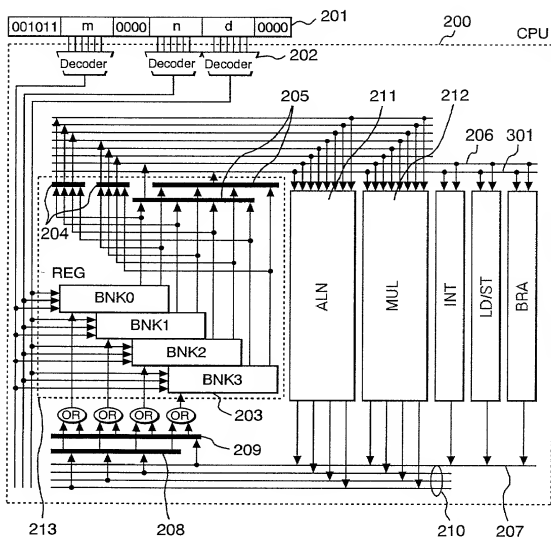
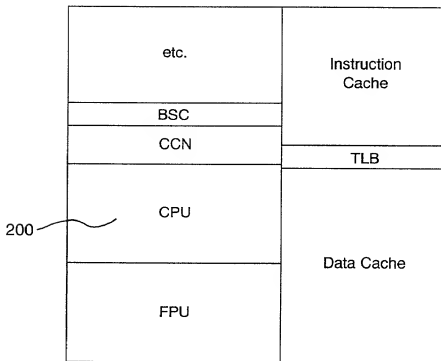
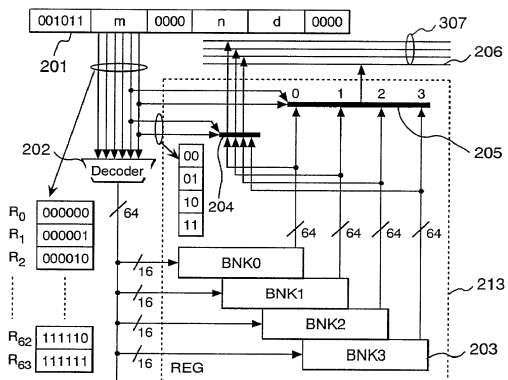


FIG. 2

Case	Age	Sex	Duration	Location	Findings
1	12	M	10 days	Left eye	Small, dark, pigmented lesion
2	15	F	2 weeks	Right eye	Small, dark, pigmented lesion
3	18	M	3 weeks	Left eye	Small, dark, pigmented lesion
4	20	F	4 weeks	Right eye	Small, dark, pigmented lesion
5	22	M	5 weeks	Left eye	Small, dark, pigmented lesion
6	25	F	6 weeks	Right eye	Small, dark, pigmented lesion
7	28	M	7 weeks	Left eye	Small, dark, pigmented lesion
8	30	F	8 weeks	Right eye	Small, dark, pigmented lesion
9	32	M	9 weeks	Left eye	Small, dark, pigmented lesion
10	35	F	10 weeks	Right eye	Small, dark, pigmented lesion
11	38	M	11 weeks	Left eye	Small, dark, pigmented lesion
12	40	F	12 weeks	Right eye	Small, dark, pigmented lesion
13	42	M	13 weeks	Left eye	Small, dark, pigmented lesion
14	45	F	14 weeks	Right eye	Small, dark, pigmented lesion
15	48	M	15 weeks	Left eye	Small, dark, pigmented lesion
16	50	F	16 weeks	Right eye	Small, dark, pigmented lesion
17	52	M	17 weeks	Left eye	Small, dark, pigmented lesion
18	55	F	18 weeks	Right eye	Small, dark, pigmented lesion
19	58	M	19 weeks	Left eye	Small, dark, pigmented lesion
20	60	F	20 weeks	Right eye	Small, dark, pigmented lesion



4/20

FIG. 4

a	b	c	d	e	f	R0	R1	R2	R3	R4	R5	R6	R7	R8	R59	R60	R61	R62	R63
0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0
0	0	0	0	1	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0
0	0	0	0	1	1	0	0	0	1	1	1	1	0	0	.....	0	0	0	0
0	0	0	1	0	0	0	0	0	0	1	1	1	1	0		0	0	0	0
0	0	0	1	0	1	0	0	0	0	0	1	1	1	1		0	0	0	0
0	0	0	1	1	0	0	0	0	0	0	1	1	1	1		0	0	0	0
...
1	1	1	0	1	1	0	0	0	0	0	0	0	0	0		1	1	1	0
1	1	1	1	0	0	0	0	0	0	0	0	0	0	0		0	1	1	1
1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	.....	0	0	1	1
1	1	1	1	1	0	0	0	0	0	0	0	0	0	0		0	0	0	1
1	1	1	1	1	1	0	0	0	0	0	0	0	0	0		0	0	0	1

FIG. 5

a	b	To 206	To 307		
0	0	X0	X1	X2	X3
0	1	X1	X2	X3	X0
1	0	X2	X3	X0	X1
1	1	X3	X0	X1	X2

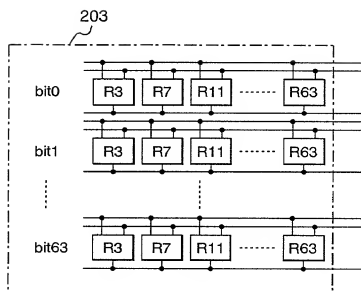
FIG. 6

FIG. 7

a	b	input			output			
0	0	X	Y	Z	0	X	Y	Z
0	1	X	Y	Z	Z	0	X	Y
1	0	X	Y	Z	Y	Z	0	X
1	1	X	Y	Z	X	Y	Z	0

FIG. 8

a	b	X	output			
0	0	X	X	0	0	0
0	1	X	0	X	0	0
1	0	X	0	0	X	0
1	1	X	0	0	0	X

FIG. 9

PACK.W Rm, Rn, Rd

xxxxxx	m	xxxxxx	n	d	0000
31	26 25	20 19	16 15	10 9	4 3 0

operation source [1] \leftarrow SignExtend₆₄(Rm);
 source [2] \leftarrow SignExtend₆₄(Rm+1);
 source [3] \leftarrow SignExtend₆₄(Rm+2);
 source [4] \leftarrow SignExtend₆₄(Rm+3);
 amount \leftarrow ZeroExtend₆₄(Rn);
 REPEAT i FROM 0 FOR 4
 result [i] \leftarrow ZeroExtend₁₆(source[i] > amount);
 Rd \leftarrow MultiRegister₁₆(result);

FIG. 10

PACK.I.W Rm, s, Rd

xxxxxx	m	s	d	0000
31	26 25	20 19	10 9	4 3 0

operation source [1] \leftarrow SignExtend₆₄(Rm);
 source [2] \leftarrow SignExtend₆₄(Rm+1);
 source [3] \leftarrow SignExtend₆₄(Rm+2);
 source [4] \leftarrow SignExtend₆₄(Rm+3);
 amount \leftarrow SignExtend₁₀(s);
 REPEAT i FROM 0 FOR 4
 result [i] \leftarrow ZeroExtend₁₆(source[i] > amount);
 Rd \leftarrow MultiRegister₁₆(result);

FIG. 11

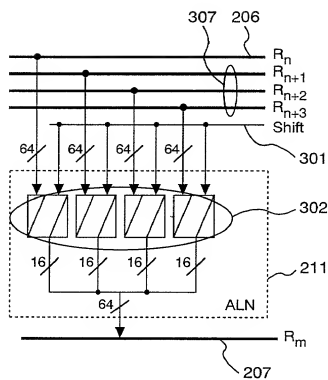


FIG. 12

UNPACK.W Rm, Rd

xxxxxx	m	xxxxx	000000	d	0000
31	26 25	20 19	16 15	10 9	4 3 0

operation source \leftarrow SignExtend₆₄(Rm);
 REPEAT i FROM 0 FOR 4
 result[i] \leftarrow SignExtend₆₄(SignExtend₁₆(source[i]));
 Rd \leftarrow Register(result[0]);
 Rd+1 \leftarrow Register(result[1]);
 Rd+2 \leftarrow Register(result[2]);
 Rd+3 \leftarrow Register(result[3]);

FIG. 13

UNPACK.B Rm, Rw, Rd

xxxxxx	m	xxxxx	w	d	0000
31	26 25	20 19	16 15	10 9	4 3 0

operation source \leftarrow SignExtend₆₄(Rm);
 REPEAT i FROM 0 FOR 8
 result[i] \leftarrow SignExtend₆₄(SignExtend₈(source[i]));
 Rw \leftarrow Register(result[0]);
 Rw+1 \leftarrow Register(result[1]);
 Rw+2 \leftarrow Register(result[2]);
 Rw+3 \leftarrow Register(result[3]);
 Rd \leftarrow Register(result[4]);
 Rd+1 \leftarrow Register(result[5]);
 Rd+2 \leftarrow Register(result[6]);
 Rd+3 \leftarrow Register(result[7]);

10/20

FIG. 14

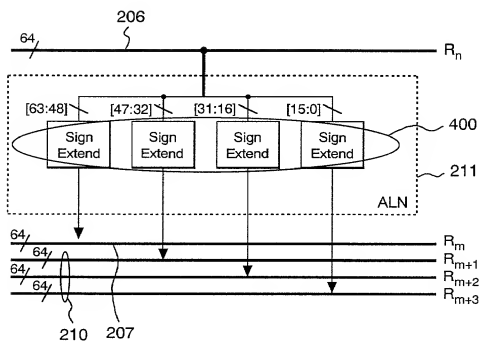


FIG. 15

MSHFLE.W Rm, Rn, Rd

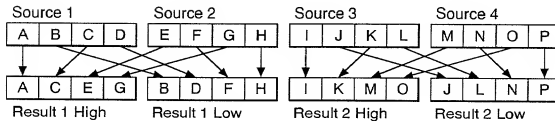
xxxxxx	m	xxxxx	n	d	0000
31	26 25	20 19	16 15	10 9	4 3 0

operation

```

source1 ← MultiZeroExtend16(Rm);
source2 ← MultiZeroExtend16(Rm+1);
source3 ← MultiZeroExtend16(Rn);
source4 ← MultiZeroExtend16(Rn+1);
REPEAT i FROM 0 FOR 2
{
  result1[i x2] ← source2[i+2]; result1[(i x2)+1] ← source1[i+2];
  result2[i x2] ← source2[i];   result2[(i x2)+1] ← source1[i];
  result3[i x2] ← source4[i+2]; result3[(i x2)+1] ← source3[i+2];
  result4[i x2] ← source4[i];   result4[(i x2)+1] ← source3[i];
}
Rd ← MultiRegister16(result1);
Rd+1 ← MultiRegister16(result2);
Rd+2 ← MultiRegister16(result3);
Rd+3 ← MultiRegister16(result4);

```

FIG. 16

12/20

FIG. 17

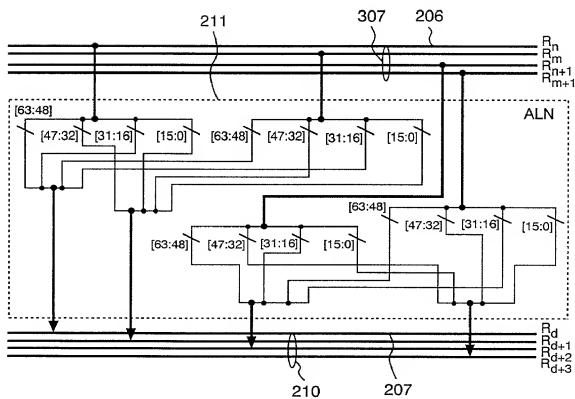


FIG. 18

MSHFHI.W Rm, Rn, Rd

xxxxxx	m	xxxxx	n	d	0000
31	26 25	20 19	16 15	10 9	4 3 0

operation

```

source1 ← MultiZeroExtend16(Rm);
source2 ← MultiZeroExtend16(Rm+1);
source3 ← MultiZeroExtend16(Rm+2);
source4 ← MultiZeroExtend16(Rm+3);
source5 ← MultiZeroExtend16(Rn);
source6 ← MultiZeroExtend16(Rn+1);
source7 ← MultiZeroExtend16(Rn+2);
source8 ← MultiZeroExtend16(Rn+3);
REPEAT i FROM 0 FOR 2
{
  result1[i x2] ← source2[i+2]; result1[(i x2)+1] ← source1[i+2];
  result2[i x2] ← source4[i+2]; result2[(i x2)+1] ← source3[i+2];
  result3[i x2] ← source6[i+2]; result3[(i x2)+1] ← source5[i+2];
  result4[i x2] ← source8[i+2]; result4[(i x2)+1] ← source7[i+2];
}
Rd ← MultiRegister16(result1);
Rd+1 ← MultiRegister16(result2);
Rd+2 ← MultiRegister16(result3);
Rd+3 ← MultiRegister16(result4);

```

14/20

FIG. 19

MSHFLOW Rm, Rn, Rd

xxxxxx	m	xxxxx	n	d	0000
31	26 25	20 19	16 15	10 9	4 3 0

operation

```

source1 ← MultiZeroExtend16(Rm);
source2 ← MultiZeroExtend16(Rm+1);
source3 ← MultiZeroExtend16(Rm+2);
source4 ← MultiZeroExtend16(Rm+3);
source5 ← MultiZeroExtend16(Rn);
source6 ← MultiZeroExtend16(Rn+1);
source7 ← MultiZeroExtend16(Rn+2);
source8 ← MultiZeroExtend16(Rn+3);
REPEAT i FROM 0 FOR 2
{
  result1[i x2] ← source2[i]; result1[(i x2)+1] ← source1[i];
  result2[i x2] ← source4[i]; result2[(i x2)+1] ← source3[i];
  result3[i x2] ← source6[i]; result3[(i x2)+1] ← source5[i];
  result4[i x2] ← source8[i]; result4[(i x2)+1] ← source7[i];
}
Rd ← MultiRegister16(result1);
Rd+1 ← MultiRegister16(result2);
Rd+2 ← MultiRegister16(result3);
Rd+3 ← MultiRegister16(result4);

```

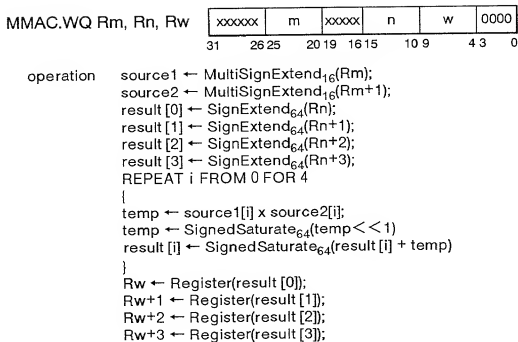
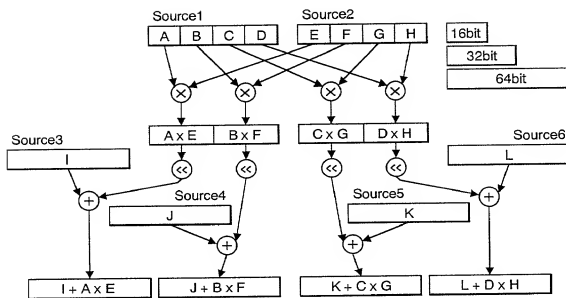

FIG. 22

FIG. 23

18/20

FIG. 24

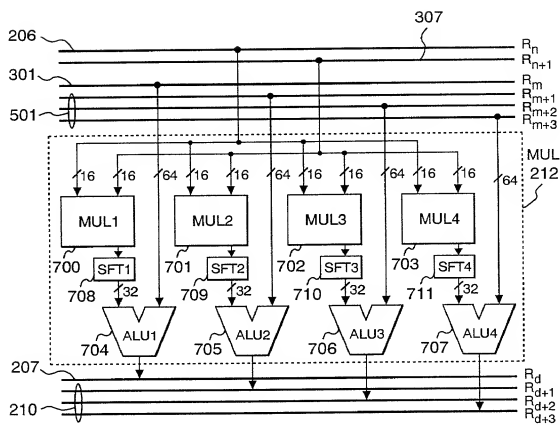


FIG. 25A

mulu.l	r51, r24, r51
mulu.l	r52, r24, r52
mulu.l	r53, r24, r54
mulu.l	r54, r24, r54
shlri	r51, 9, r51
shlri	r52, 9, r52
shlri	r53, 9, r53
shlri	r54, 9, r54
st.w	r17, 0, r51
st.w	r17, 2, r52
st.w	r17, 4, r53
st.w	r17, 6, r54

FIG. 25B

mulu.l	r51, r24, r51
mulu.l	r52, r24, r52
mulu.l	r53, r24, r54
mulu.l	r54, r24, r54
pack.w	r51, 9, r55
st.q	r17, 0, r55

FIG. 26A**FIG. 26B**

mshfhi.w	r17, r63, r20	unpack	r17, r17
mshflo.w	r17, r63, r17		
mshfhi.l	r20, r63, r19		
mshflo.l	r20, r63, r20		
mshfhi.l	r17, r63, r21		
mshflo.l	r17, r63, r17		

FIG. 27A**FIG. 27B**

mshfhi.w	r21, r6, r31	mshfle.w	r21, r6, r41
mshflo.w	r21, r6, r21		
mshfhi.w	r31, r21, r41		
mshflo.w	r31, r21, r42		
mshfhi.w	r22, r7, r32		
mshflo.w	r22, r7, r22		
mshfhi.w	r32, r22, r43		
mshflo.w	r32, r22, r44		